

ABSTRACT OF THE DISCLOSURE

Small projection optical systems and projection-type image display apparatuses use a plurality of prisms with internally reflecting surfaces with optical power, an incident light refracting surface, and an exit light refracting surface in order to project an image of an image display element on a nearby screen. The ratio of the distance to the screen from the exit light refracting surface of the projection optical system and the distance to the image display apparatus from the incident light refracting surface of the projection optical system satisfies a condition that the ratio be less than twenty. A diaphragm that serves as an aperture stop is placed between two of the prisms. The internally reflecting surfaces may be free-form surfaces or simpler rotationally symmetric aspheric surfaces. Six internally reflecting surfaces of free-form shape are disclosed in a preferred embodiment.